DETAILED ACTION

Response to Amendment

Claim 40, previously found as containing allowable subject matter, yet objected to as being dependent upon a rejected base claim, per the previous office action mailed 9 September 2008, is herein rejected over new prior art of record. Accordingly, the finality of the last Office action has been withdrawn, the amendment filed 12/9/08 has been entered and an action on the merits of all the pending claims appears below.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 40 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 40, Line 12, recites the limitation "the" in "... one of the ... deflecting roller...". There is insufficient antecedent basis for this limitation in the claim.

Drawings

The drawings are objected to under 37 CFR 1.83(a) because they fail to show the deflecting roller as described in the specification (Para. 0003 – 0006), in view of the language of **Claim 40**. As understood, the term "deflecting roller" corresponds to the elements 4.2 – 4.4, therein comprising the guide- and cage support rollers. However, in that the claim positively recites "the ... deflecting roller" in conjunction with guide- and cage support rollers, a deflecting roller in addition to guide- and cage support rollers has not been depicted or described.

Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to

avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heinz et al (2003/0121729) in view of Takahashi et al (6,419,605) and in further view of Drabot et al (2003/0051948).

Heinz et al disclose an elevator installation (Fig. 3) comprising:

- an elevator cage (E);
- a drive pulley (P2);
- a deflecting pulley (P1);
- at least one support means formed as a flat belt (10); and

- a drive engine (M) which drives the at least one support means, which carries the elevator cage, by way of the drive pulley;
- wherein the support means has, at least on a running surface facing the drive pulley, several ribs (25) of wedge-shaped cross-section which extend parallel in a longitudinal direction of the support means and further has several tensile carriers (15) oriented in the longitudinal direction of the support means, the tensile carriers being distributed in a transverse direction of the support means;
- wherein at least one of the drive pulley and deflecting pulley has grooves in its periphery formed complementary to the ribs of the support means;
- wherein the elevator cage is supported with a cage support roller (PE) around which the support means runs in order to support said elevator cage.

however, Heinz et al are silent with respect to a cross-sectional area of their support means, guide rollers, a plurality of cage support rollers and ribs of their support means being disposed on a side of the support means remote form said cage support roller.

Heinz et al, however, disclose their ribs of their support means disposed on a side of the support means remote from their counterweight support roller (PCW, Para. 0035), wherein their counterweight support roller and a deflecting pulley (P3) are "... referred to as "back-side" pulleys"

Attention is directed to Takahashi et al who teach their tensile carriers (2) comprising approximately 20% of a cross-sectional area of their support means (based on each rib, d x H less 2 x ½ x hr x C), wherein the number, arrangement and orientation with respect to each rib and rib flank is in keeping with the instant invention, for reductions in vibration and noise as well as enhanced service life.

Though Takahashi et al does not teach their tensile carriers (2) comprising at least 25% of a cross-sectional area of their support means, in that Heinz et al disclose their tensile carriers and ribs of wedge-shaped cross-section, and Takahashi et al teaches their tensile carriers comprising approximately 20% of a cross-sectional area of

their support means, it would have been an obvious to one of ordinary skill in the art, as a matter of optimization and experimentation, to provide the tensile carriers comprising at least 25% of a cross-sectional area of a support means in as much as the criticality of these percentage has not been disclosed yet such constructions have been anticipated by the prior art of record.

Furthermore, based on a consequential increase in their diameters to afford the desirable load-carrying and structural reinforcing aspects to a respective rib, a total cross-sectional area of all their tensile carriers would comprise 30% to 40% of a cross-sectional area of the support means.

Additionally, Takahashi et al teach their guide roller (23, Fig. 7) wherein their ribs of their support means are disposed on a side of the support means remote from said guide roller, to promote tension about their drive pulley (23).

It would have been obvious to one of ordinary skill in the art to modify the reference of Heinz et al with Takahashi et al for user comfort and increased uptime.

However, Takahashi et al are silent with respect to a cage support roller(s).

Attention is directed to Drabot et al who teach their cage support rollers (28, Fig. 1 and 3) and their guide rollers (32), wherein their support means is biased into the grooves of their cage support rollers to provide lateral guidance for enhanced traction.

Though Drabot et al are silent with respect to their support means having ribs, in that Heinz et al teach their deflecting roller and counterweight support roller as "back-side pulleys", wherein the ribs of their support means are disposed on a side of their support means remote from their support roller and Drabot et al teach their guide roller(s) approximate of their cage support rollers to promote lateral guidance for traction, It would have been obvious to one of ordinary skill in the art to modify the invention of Heinz et al and Takahashi et al with the teaching of Drabot et al for utility.

Allowable Subject Matter

Claims 19 and 31 are allowed.

Response to Arguments

Applicant's arguments filed 9 December 2008 have been fully considered but they are mute in view of new grounds of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wetzel (4,235,119), Bissig et al (2008/0081721), Schroder-Brumloop et al (6,138,799) and Birman (1,820,427) and Yamashite (5,566,783) are cited for reference of:

- teaching the preference of minimizing an amount of elastomer between tensile carriers in order to minimize loss of tensile strength of a support means;
- a flat belt having wedge-shaped ribs with tensile carriers wherein spacings between centers of two tensile carriers associated with a rib are smaller than spacings between the centers of adjacent tensile carriers associated with two adjoining ribs;
- an elevator counterweight equipped with support rollers around which a drive means runs in order to drive said counterweight;
- an elevator installation having guide rollers for providing lateral guidance to support means, respectively.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Kruer whose telephone number is 571.272.5913. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Cuomo can be reached on 571.272.6856. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866.217.9197 (toll-free).

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30 December 2008
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